

REMARKS:

This application has been carefully studied and amended in view of the Office Action dated February 24, 2006. Reconsideration of that action is requested in view of the following.

The allowance of claims 30-34 is noted with appreciation.

Claim 1 has been amended to more clearly define the invention. Claim 55 has been canceled since it is redundant. In that regard claim 55 recited the feature of the first layer being heat curable whereas parent claim 1 already recited that feature. Claims 56-58 have been added to complete the claim coverage. Claim 56 is an independent claim similar to prior claim 1 combined with dependent claim 54. Claims 57-58 are dependent on claim 56. Since there are still only three independent claims a supplemental filing fee is not required for the presentment of independent claim 56. The Commissioner, however, is authorized to charge Deposit Account No. 03-2775 with regard to the two additional total claims.

The present invention relates to aspects of the invention in parent U.S. Patent No. 6,372,334. The claims in the parent patent are directed to a reinforcement laminate in combination with a substrate when the laminate is in its final reinforcing condition. Allowed claims 30-34 of this application are similarly directed to such structure. The claims under rejection and newly added claims 56-58, however, are directed to the laminate in its condition before the "foam" layers are in their "foamed" condition. This

would be the form of the laminate when, for example, it would be supplied to a customer. Various dependent claims refer to the substrate itself with the laminate being bonded to the substrate. These claims are also directed to the condition of the laminate before the "foamable" materials are foamed. The laminate essentially comprises three layers. One of these layers is a carrier layer. In a preferred practice of the invention the carrier layer is made of a non-foamable material such as a foil backing (dependent claim 2) or fiberglass cloth, metal screen or foil (dependent claim 35). The next layer is the first layer of foamable material. This layer refers to the material which structurally has the capability that upon activation it becomes a rigid reinforcement foam which would be secured to the carrier layer. That capability is a structural characteristic of the material. The third layer is a second layer of foamable material which has the capability upon activation of becoming a compliant foam and is secured to the first foamable layer. Again, the characteristic of being capable upon activation of becoming a compliant foam is a structural characteristic of that layer. The second foamable layer also functions to comprise a bonding layer for securing the laminate to a substrate. Both foamable layers are heat curable. An advantage of this characteristic is that when, as in the preferred practice of the invention, the laminate is secured to a substrate which is a vehicle part the heat curing could

automatically take place during the conventional steps used in manufacturing a vehicle which would include a heating step. The second foamable layer additionally functions that when it becomes a foam layer it is capable of absorbing shrinkage strains due to heat cure of that layer and cooling of the substrate. This again is a physical requirement for the material selected and used as the second foamable layer. Finally, the laminate includes a pattern of holes which create open passageways that extend completely through the laminate. As discussed in the specification the advantage of this physical requirement is to address the problem of paint read through. All of these structural features combine to create a laminate that would eliminate or reduce such paint read through. In contrast, the references relied upon in the various rejections are not concerned with providing such a laminate and thus would provide no motivation for any modifications to the structures described in those references where the prior art is devoid of addressing the paint read through problem.

In view of the above, reconsideration is respectfully requested of the rejection of claims 1, 3, 7, 16-18 and 52-53 over Steward. As recognized by Examiner Vo "Steward discloses a vehicle headliner comprising a laminate that includes a resilient foam core disposed between two thermoplastic film layers..." Steward discloses at col. 5, lines 26-30 that "The films of the composite laminar sheet can be composed of the same polymer as the foam core

although they preferably incorporate minor amounts of additional modifying agents to increase their impact resistance". If this three layer construction of Steward which comprises a foam core disposed between two thermoplastic layers is considered as the laminate of, for example, claim 1 then claim 1 differs with regard to the structure of the first and third layers. For example, if the film layers are composed of the same polymer as the core layer then when they are subjected to heating the two films would also become foamed as would result with the core layer. As such, neither of the films would then have the characteristic stated in claim 1 of "said carrier layer being made of a non-foamable material". On the other hand, if the film layers do not become foams upon being heated, then there is no second layer required by claim 1 which has the characteristics of being "capable upon activation of becoming a compliant foam".

As regards newly added independent claim 56 that claim includes, inter alia, the recitation of a specific type of material for the first layer which is the subject of dependent claim 54 and which was not included in any rejection over Steward.

Reconsideration is respectfully requested of the rejection of claims 1, 3-18, 35-36 and 52-53 over Isola. In the Office Action Examiner Vo stated that "Isola discloses a vehicle headliner comprising a multilayered laminate that includes a rigid foam substrate 190, an intermediate insulating material 192 and a

resilient foam like covering material 192" wherein a "plurality of holes are completely through the laminate as shown in figure 7". If this three layer laminate is compared with the claimed laminate defined in claim 1 then the Isola laminate lacks a "carrier layer being made of a non-foamable material" since the one outer layer 190 is made from a foam material while the covering material 192 is also made from a foam like material. Moreover, it is not clear from Isola with regard to the laminate of Figure 7 at what stage the perforations are formed. Claim 1 defines the pattern of holes as extending completely through the laminate prior to the first and second layers being activated so as to become foam materials. What is shown in Isola is the perforations extending through layers which are already in the foamed condition.

Reconsideration is respectfully requested of the rejection of claim 54 as being obvious over Isola. Similarly, it is respectfully submitted that newly presented claims 56-58 are not obvious over Isola. With regard to claim 54, this claim is dependent on claim 1 and should be allowed for the reasons submitted above. In addition, claim 54 and newly added parent claim 56 relate to the specific composition of the material of the first layer. As recognized by Examiner Vo such material is not disclosed in Isola. Applicant strongly disagrees that it would be obvious to modify the material of Isola so as to result in the material defined in dependent claim 54 and in parent claim 56. The

purpose of such material as claimed herein is to provide a layer which upon activation will become a rigid reinforcement foam and which in combination with the carrier layer and the second layer, as well as with the inclusion of the pattern of holes creating open passageways through the laminate, result in a structure which will eliminate or reduce paint read through. There is no disclosure or even remote suggestion that such problem is a concern with Isola. Note is also made that newly added dependent claim 57 defines "said carrier layer is made of a non-foamable material" while newly added dependent claim 58 recites "said carrier layer is made from the group consisting of fiberglass cloth, metal screen and foil". As discussed above with respect to claim 1 if either the substrate 190 or the covering material 192 is considered as the carrier layer of Isola, then neither of those layers would be made from the type of material defined in claims 57-58.

Reconsideration is respectfully requested of the rejection of claims 1, 3-14, 18 and 36 over Nomura. Nomura relates to a multilayer acoustic ceiling panel having a number of different layers. One set of layers is a polyethylene foam layer 2 which is secured to sheet 4. A second layer is polyethylene foam layer 3. A metal lathe is sandwiched between the two foams 2,3. As stated in column 2, lines 59-64 of Nomura the two polyethylene foams 2,3 are separately bored and the metal lathe 1 is sandwiched between the two foams. Accordingly, what Nomura is directed to is a

laminate wherein the various layers 2,3 are already in their foamed condition and the holes are punched through the foam layers before the laminate is formed. This is in contrast to claim 1 (and to newly added claim 56) which is directed to a laminate where the layers already have the holes therethrough while the layers are still "foamable", i.e. prior to becoming expanded foam layers. Applicant does not agree with the position essentially being taken by Examiner Vo that because the phrase "capable upon activation of becoming..." indicates a "future action which may be done but is not required to be done". By the logic of this position, Examiner Vo concludes that "the presently claimed laminate structure does not exclude the auto ceiling panel of Nomura". The disagreement by applicant is that the questioned phrase is not merely an indication of a possible, but not necessary future action, but rather it is a recitation of structural characteristics of the material of the first layer and of the material of the second layer. Not all materials structurally have the capability of becoming upon activation either a rigid reinforcement foam or a compliant foam. Such materials at the outset would have to have the capability of becoming a foam and then would have to be either a rigid foam or a compliant foam which are different structural characteristics. Accordingly, this capability is a physical structural requirement for the material that is used in the laminate. The laminate is directed to structure where the first layer and the second layer

are not yet foamed and where in this unfoamed condition a pattern of holes extends completely through the laminate. This is simply not shown or suggested by Nomura.

Reconsideration is requested of the rejection of claims 15-17 as obvious over Nomura and of the rejection of claims 2 and 35 as obvious over Nomura in view of Daniel. Each of these claims is dependent on claim 1. Accordingly, by virtue of their dependency, such claims should be allowed. Moreover, there is nothing in Nomura itself or in Daniel to provide the motivation for making the modifications to Nomura stated in these rejections in order to result in structure which would correspond to the structure being claimed.

Reconsideration is respectfully requested of the rejection of claims 1-4, 7, 16-18 and 52-54 over Wycech in view of Muramatsu. Wycech relates to a composite laminate beam for an automotive body construction. In the rejection Examiner Vo indicated that "Wycech discloses a windshield pillar comprising a rigid foam layer sandwiched between an outer shell 14 and an inner tube 16..." Such "pillar includes a pattern of holes completely through the pillar as shown in figure 2". What is disclosed in Wycech is a layer of material 18 that would be applied to an automotive component. Thus, for example, the outer shell 14 and the inner tube 16 are really parts of the vehicle which would correspond to the "substrate" referred to in claim 1 as being the member that would

be reinforced by the laminate. In other words the three layers referred to in the Office Action of layer 18 "sandwiched between an outer shell 14 and inner tube 16" do not correspond to a separate laminate having three layers which comprise a carrier layer and two foamable layers already having holes creating open passageways completely through the laminate before the two foamable layers are activated into their foamed condition. At best, Wycech discloses a single layer that would correspond to the rigid reinforcing foam which would result when the claimed laminate is activated. Wycech lacks, however, two of the three other components of that laminate namely the carrier layer and the second layer capable of becoming a compliant foam. All three of these layers are separate and distinct from the substrate itself.

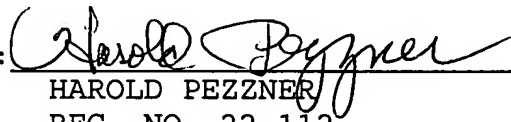
The deficiencies of Wycech are not overcome by any hypothetical combination with Muramatsu. At the outset neither Wycech nor Muramatsu is concerned with providing structure which addresses the paint read through problem. Accordingly, there would be no motivation to modify Wycech in order to provide the structure of claim 1 or of newly added claim 56 which relate to a laminate directed to that problem. But, even if such combination were made, the result would be a windshield pillar having a soft foam layer in addition to the rigid layer of Wycech which would be sandwiched between the outer shell 14 and inner tube 16 of Wycech. Such hypothetical combination would not result in the three layer

laminate which is separate and distinct from the substrate. Such hypothetical combination would lack the carrier layer, particularly one made of a non-foamable material (claims 1 and 57) or of a material which is a foil backing (claim 2) or which is a material selected from the group consisting of fiberglass cloth, metal screen and foil (claims 35 and 58).

In view of the above remarks and amendments this application should be passed to issue.

Respectfully Submitted,

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